

Abstract of Disclose

A power-up circuit includes a power supply voltage level follower unit for outputting a first bias voltage and a second bias voltage which increase or decrease in proportion to a power supply voltage; a first power supply voltage detecting unit for detecting that the power supply voltage becomes a first critical voltage level of the power supply voltage corresponding to a threshold voltage of an NMOS transistor in response to the first bias voltage; a second power supply voltage detecting unit for detecting that the power supply voltage becomes a second critical voltage level of the power supply voltage corresponding to a threshold voltage of a PMOS transistor in response to the second bias voltage; and a summation unit for performing a logic operation to a first detect signal outputted from the first power supply voltage detecting unit and a second detect signal outputted from the second power supply voltage detecting unit to thereby output a confirmation signal, wherein the confirmation signal is activated when the power supply voltage satisfies both of the first and second critical voltage levels.